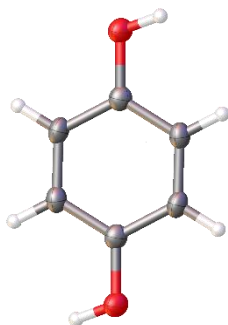
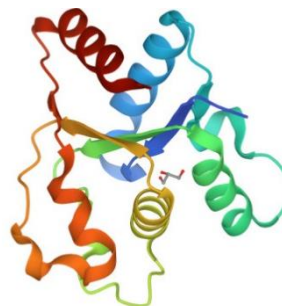


Development of 3DED/MicroED facility at the University of Queensland

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Micro-Crystal Electron Diffraction (MicroED) [1-2] has created excitement in the scientific community as an emerging crystallography method to determine the 3-dimensional atomic structure of nanocrystals. These nanocrystals are too small for conventional X-ray diffraction and too complex for powder X-ray diffraction. Our team of expert microscopists and crystallographers are staying abreast of this rapidly advancing field. Together with MicroED expert Dr. Hongyi Xu from Stockholm University, the CMM team successfully collected UQ's first ever MicroED datasets of small molecules and Macromolecules using the old cryo-Transmission Electron Microscope Tecnai F30 equipped with a cryo-transfer holder and OneView Gatan Camera.

In this presentation, I will show several such examples of Pharmaceuticals and Macromolecules obtained from data collected on a 300 kV Tecnai microscope.

**Figure 1.** Hydroquinone crystal structure.**Figure 2.** Crystal structure of the TIR domain from human SARM1 in complex with glycerol.

[1] Dan, S., Brent, L. N., Matthew, G. I. & Gonen, T. (2013). *eLife* 2:e01345.

[2] Gemmi, M., Mugnaioli, E., Gorelik, T. E., Kolb, U., Palatinus, L., Boullay, P., Hovmöller, S. & Abrahams, J.P. (2019). *ACS Cent Sci.* 5(8):1315-1329.